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ABSTRACT

A 10-minute videotape program that reviews library skills was evaluated with 8 fifth and sixth grade classes in the St. Louis area to determine both the effectiveness of the program itself and the method of formative program evaluation. The program used videotaped slides to present program ideas. Questions focused on whether students who viewed the tape improved in the specific library skills presented, the level of sophistication of fifth and sixth graders as library users, their library experience, whether they liked the videotaped slide sequence, and whether students perform library tasks differently in groups than individually. Results of both pre- and post-testing and testing without exposure to the program indicated that the review of library skills provided in the videotape did not serve to raise student's scores on written tests of library skills. The research methodology was determined to be both economical and fruitful for formative evaluation. The production approach using slide to tape was liked by most students, but a number of questions concerning its efficacy remain. (Author/LMM)

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ED249984

The Essential Learning Skills Television Project:

RESEARCH REPORT

RESEARCH REPORT

A PROGRAM EVALUATION CONCEPT AND METHODOLOGY--THE VIDEO STORYBOARD: AN EVALUATION OF "THE PUBLIC LIBRARY"

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The Agency for Instructional Television is a nonprofit American-Canadian organization established in 1973 to strengthen education through television and other technologies. AIT develops joint program projects involving state and provincial agencies, and acquires and distributes a wide variety of television and related printed materials for use as major learning resources. It makes many of the television materials available in audiovisual formats. AIT's predecessor organization, National Instructional Television, was founded in 1962. The AIT main offices are in Bloomington, Indiana; there are regional offices in the Washington, D.C., Atlanta, and San Francisco areas.

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TABLE OF CONTENTS

	Page
Abstract	iii
Introduction	1
Methodology	2
Written test of library skills	3
Performance test of library skills	4
Questionnaire	5
Class discussion	5
Findings	5
Written test of library skills	6
Performance test of library skills	10
Follow-up questionnaire	14
Discussion	16
Research design	18
Summary and Conclusions	20
Appendices	23
I. Written test of library skills	25
II. Performance test of library skills	31
III. Questionnaire	33

Abstract

The Agency for Instructional Television produced a 10-minute videotape program that reviews library skills for use in testing a program evaluation concept, the first Essential Learning Skills Television Project production and research approach to be tested. Eight St. Louis-area classes participated in the formative evaluation effort. Through both pre- and posttesting and testing with and without exposure to the program, sufficient data were generated for statistical analysis of the learning effects of the tape. Comparing test scores from students who had viewed the tape with those who had not yielded no statistically significant differences. The research methodology was itself evaluated for its economy and fruitfulness, and found to have both. The production approach (slide to tape) was liked by most students, but a number of questions concerning its efficacy remain.

Introduction

The Essential Learning Skills (ELS) Television Project takes as its goal the strengthening of learning skills instruction by developing television and other materials concerned with communication skills, mathematics skills, and reasoning and study skills. One particular skill is using the library, the subject of the program material recently evaluated in St. Louis classrooms and school libraries.

Not only was the program idea, for the review of library skills, to be tested in the fifth and sixth grade classrooms we visited, but also the method of testing was to be evaluated. This method includes the vehicle for presenting the program idea and the experimental design.

The program idea was presented on videotape. Standard production techniques were used to create the illusion of movement from a series of still photographs while adult narrators voiced over the dialogue and described the action. At several points the action stops and the viewer is given time to consider the question facing the children in the program.

The story presented in this videotape was based on an original script entitled "The Great Cereal Debate," prepared from developmental material created by the ELS instructional design team. At the beginning, a debate over the nutritional value of each of three children's cereal preferences

is described. In order to resolve the debate the children decide to go to the library. The scene opens with their arrival at the library and follows them through their search.

The script was rewritten in narrative form and still photographs shot in action sequence and videotaped at WTIU-TV in Bloomington, Indiana. The initial effort resulted in a 20-minute program, considered to be too long. Other reasons as well led to the modification of the production: A single narrator is inadequate; multiple voices are needed. The production itself should not be "slick" or highly finished, and more editorial control and sharper objectives are called for to produce a brief tape that effectively and accurately presents program ideas. Excessive verbiage was deleted, both male and female voice-overs were substituted for straight narrative, and some content revisions were made on the recommendation of two local school librarians.

The research site was the metropolitan St. Louis area. Students there view in-school television through the services of KETC-TV, Channel 9, and four different schools in their coverage area were included in this test. The four schools were Halls Ferry and Desmett Elementary Schools in the Ferguson-Florissant School District and Daniel Boone Elementary and Brittany Middle Schools in the University City School District.

Methodology

Several approaches were taken to obtain information of concern to AIT evaluators and curriculum designers. Among these questions were: Did the students who viewed the tape improve in the specific library skills presented? That is, were there differences in students' test scores among those who had and had not seen the videotape? How sophisticated

are fifth and sixth graders as library users? What is their library experience? Did students like the videotaped slide sequence? Did students perform library tasks differently when in groups than when performing them individually?

The methods employed for obtaining relevant data were:

1. A written test of library skills;
2. an in-library performance test of library skills;
3. a written questionnaire on the program and on library experience; and
4. a class discussion of personal library use.

Written Test of Library Skills

The written test of library skills was an eight-question test. It is included as Appendix I. It covers the use of subject, author, and title entries in the card catalog, the use of reference material, and the use of books' indexes and tables of contents.

Written tests were administered to students in all participating classes. Of these classes, four were fifth grades and four were sixth grades. Two of the sixth grade classes were in a middle school; two others, in a different school district, were in elementary schools. Tests were printed on two different paper colors, so that we could distinguish between the tests of students who had been judged by their teacher to be of high ability and those who had been judged to be of low ability. Teachers assisted us by designating which of their students should receive tests indicating high ability, with other students receiving the other color of test.

Although all students took the test, not all students had seen the videotape before they did so. Half the classes (i.e., four) took the

test without viewing the program, two classes took the test before and the same test after viewing the program, and two classes watched the tape and then took the test. Table 1 shows this schema.

TABLE 1

TESTING SCHEMA

Exposure		No Exposure
Pretest/Posttest	Posttest	
1-5th grade class	1-5th grade	2-5th grade classes
1-6th grade class	1-6th grade	2-6th grade classes

Performance Test of Library Skills

In each of the eight classrooms, three or four students were selected at random to go to the school's library and demonstrate their library use skills through a series of exercises. This library performance test is included as Appendix II. It covers the same types of skills as does the written test.

Of the three or four students chosen to work in the library from each class, one was asked to work alone and the others to work together as a group. Two researchers "shadowed" the performers' activities, making careful note of search strategies. In total then, 16 performance tests were taken, counting each group's performance as a single event. Performers from one class that had seen the videotape and one class that had not took the written library skills test before they went to the library.

Questionnaire

Classes that saw the program were asked to complete a short (one-page) questionnaire concerning it. Students were asked for their opinions of what the program was about, for any conclusions they may have drawn from the program, their sense of the taped slide technique, and how often they go to the library. This questionnaire is found in Appendix III.

Class Discussion

The fourth mode of information gathering was the class discussion, carried on while library performers were at work. Both classes that had and had not seen the videotape were included. The discussion was unstructured, but certain questions were asked in all contexts. One was, "What kinds of problems do you have in the library?" Another was, "What do you like/dislike about the library?" Students who had been shown the library program were asked if they would be likely to do something like what the children in the program did.

Findings

As previously noted, classes were selected for participation in this testing effort by the KETC School Services Department from their roster of school television off-air recording participants. Each class was assigned to one of the testing conditions detailed in Table 1: pre-test, exposure, posttest; exposure, posttest only; and no exposure, post-test (the control group). Therefore, data were collected on the test scores of students who took a test of library skills before and after viewing a videotape that was designed to review library skills, after viewing the videotape, and without seeing the videotape at all. In

addition, the data collected under each testing condition pertain to students at two levels of ability.

Written Test of Library Skills

Analysis of variance, using the Statistical Package for the Social Sciences, was the statistical technique used to determine the likelihood that test scores of students with exposure to the videotape were drawn from the same population as scores of students who had not seen it. This analysis also shows the likelihood that test scores of students with high ability were drawn from the same population as scores of students considered to be of low ability.

A two-way analysis of variance was run on two different data sets, with test score as the dependent variable and exposure to the videotape and level of ability as the independent variables.

Considering the scores of those students who had been given both a pretest and a posttest, we did not find a significant difference in scores attributable to exposure to the videotape, although the level of ability of the test-taker did make a significant difference.

Looking at the scores from students who took the test without viewing the tape and those who took a posttest after viewing the tape, we found the same pattern: scores according to exposure did not vary significantly; scores according to ability did. Table 2 reports these findings.

We also investigated the possibility of a "test effect" on the posttest scores of those students who had taken a pretest before they viewed the videotape. This was done by comparing the postexposure scores of students who had taken a pretest with the scores of those who had not, again using the analysis of variance technique. However, the posttest

scores of pretested students were not significantly different than the scores of students who had not taken a pretest.

Because the posttest scores seem not to be influenced by a pretest, all post-exposure scores were combined for comparison with all pre-exposure and non-exposure scores. This finding is reported as the third row of Table 2, with, of course, the same conclusion.

TABLE 2

SCORE AS A FUNCTION OF ABILITY AND EXPOSURE

Variable	F	Significance of F
Exposure to tape (scores from those with both pre- and posttest)	.234	.630
Ability level	7.382	.001
Exposure to tape (scores from those with posttest only and no exposure pretest)	2.342	.130
Ability level	10.895	.001
Exposure to tape (scores from all post-exposure tests and pre- and no-exposure tests)	1.682	.196
Ability level	23.816	.001

Additional analysis was made of the difference in scores with and without having seen the videotape among students at a given level of ability. Looking only at students who had been judged to be of high ability, exposure to the tape did not significantly raise test scores, regardless of grouping (pretest-posttest; posttest-control; combined

non-exposure--posttest). Similarly, neither test condition nor exposure made a difference in scores among low-ability students. These results are reported in Table 3.

TABLE 3

SCORE BY ABILITY LEVEL AS A FUNCTION OF EXPOSURE

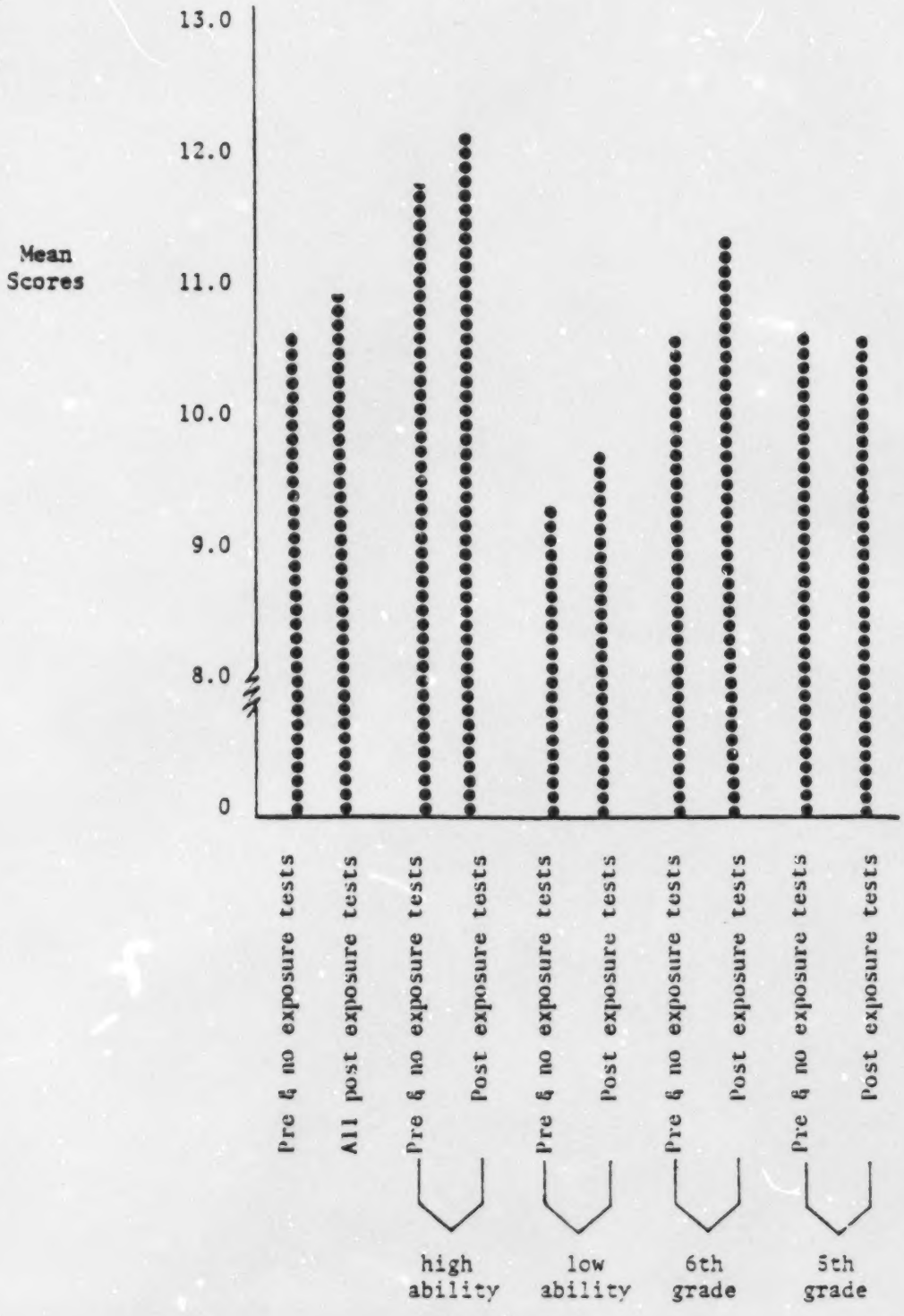
Ability of Students	F	Significance of F
High Ability		
Pretest/Posttest	.616	.438
Posttest/Control	1.478	.232
Combined non-exposure/ Posttest	1.134	.289
Low Ability		
Pretest/Posttest	.013	.909
Posttest/Control	.926	.341
Combined non-exposure/ Posttest	.622	.432

Table 4 displays the results of the written test of library skills in yet another way. Here, the mean scores on the test, with and without having viewed the videotape, are shown. A pair of scores is given for four groups (students of high ability, students of low ability, fifth graders, and sixth graders) and for all test-takers. One can readily see the better performance of students of high ability and of sixth graders. In each case, post-exposure score averages are at least equal to the pre-exposure or no-exposure test scores of the same group.

Conclusions from these analyses are straightforward: The review of library skills provided in the videotape did not serve to raise students' scores on written tests of library skills. Students of high ability did well regardless of exposure to the program idea, and students of low ability did not do well, regardless of exposure. Taking a pretest, before viewing the tape, did not materially affect scores on post-exposure tests.

TABLE 4

MEAN SCORES OF STUDENTS IN DIFFERENT TEST CONDITIONS



Performance Test of Library Skills

Because of the very small number of performance test scores on which to perform any analysis--there are 16--a nonparametric randomization test was employed. In addition to this statistical analysis, we also summarized the results of these tests as mean scores.

Several considerations should be made with respect to interpretation of the in-library performance test. First, two different researchers shadowed performers, so some variation may be introduced in scoring. In order to mitigate the effects of different judges, the researchers did not always shadow the same type of performer (i.e., individual or group). Second, scores were based on the number of right responses rather than on subjective criteria. While we forego some of the richness of the data as a result, this appeared to be the only fair method of scoring.

The design of this research provided us with five different categories of performers, each of which may be interesting to look at for differences in performance test scores. First and most obviously is the distinction between performers who had seen the videotape and those who had not. Performers may also be grouped by whether they worked alone or in a group, by ability level (of individuals), by grade (i.e., fifth or sixth), and by whether or not they had been given a written test of library skills before being brought to the library. Table 5 gives the mean score for each of these groups, as well as the significance of the differences.

These data illustrate the positive effect of having taken a pretest, as well as the higher performance scores of students who were designated to be of high ability. Examination of scores of individual and group performers did not yield a significant difference, although the mean score of groups was greater than that of individuals. No (significant) differences were to

TABLE 5

LIBRARY PERFORMANCE TEST SCORES

Group comparison	Mean scores	Significance (.05 level)
Exposed/non-exposed	8.38/8.00	Not significant
Group/individual	9.13/7.25	Not significant
High ability/low ability	8.67/3.00	Significant
Pretested/no pretest	9.25/7.13	Significant
Fifth grade/sixth grade	7.38/9.00	Not significant

be found between the scores of fifth graders and sixth graders, although, again, the relationship of mean scores is in the predicted direction (with sixth graders doing better than fifth graders in the library exercises).

The principal independent variable, the experimental variable, was exposure to the videotape designed to review library skills. Considering all performance scores, no difference was found between those who had seen and not seen the program. We investigated further in order to discover more subtle relationships between test score and program exposure. That is, the influence of the program may occur only in certain circumstances, such as among students of particular ability or grade levels, and we investigated each of four such conditions.

The program may be thought to have affected performance test scores for students who worked in groups but not for those who worked alone. This is not borne out however. Another relationship considered was whether the program differentially affected individuals of high and low ability. Because this analysis is necessarily restricted to individuals, there are not sufficient scores to test statistically significant relations, although the question posed is undoubtedly among the more interesting.

A third mediating influence on the program's effect may be the prior administration of a pretest. We looked at the differences in scores of viewers and nonviewers when both groups had taken a written test of library skills before doing the performance test. In this case we found performance test scores were significantly higher for students who had seen the videotape. A puzzling finding--at least one contrary to expectations--was made when the scores of those who had not taken a pretest were compared. In this instance, nonviewers did significantly better on the performance test than viewers did.

Finally, scores of fifth and sixth graders were considered separately to discover the effects of program exposure on each grade level. In both grades, performance test scores did not differ significantly between viewers and nonviewers.

Some speculation on these findings may be in order. First, the fact that the pretest contained some questions that were very similar to those on the performance test may account for the former's positive influence on the latter. Performers may also have been alerted to what they might have to attend to in the program as well.

Secondly, with respect to the comparison of viewers and nonviewers who had not received a pretest, there seemes to be no alternative explanation other than negative effects of the videotaped program. The program alone, without pretest or follow-up discussion, may have confused the performers by not providing any advance notice about what was expected. The fact that more than half of the exposed respondents believed that the program concerned nutritional or health information may suggest that this is so. If the viewers were not cued by the pretest on what kinds of things to attend to, those who thought the focus of the program was nutrition may have become more confused after being told in our introduction that we were interested in library skills.

Third, the observed difference in mean scores of groups and individuals, although not statistically significant, supports the researchers' intuition. One interesting sidelight in this result is that the only group composed of three students designated "low ability" obtained the only perfect score among nonviewing performers. Often in groups of both high and low skilled students, the high ability students took over the task and permitted the low ability students only minimal input.

Yet another comment should be made with respect to the program content and the performance test questions. Four questions cover the use of an index to find a specific reference, the difference between subject heading and title on a subject entry card, and the use of cross reference by author and by subject when provided with the title card of a particular book. These points, while addressed in the videotaped program, were not clearly presented. For example, when the child in the tape used the index, no explanation of why or how he did so was provided, although a detailed description of the use of the table of contents was given. This could have been a source of confusion for those among the performers who had seen the program beforehand: If the student used the table of contents, s/he had to flip through that chapter to find the right page; if s/he used the index, the answer was immediately clear.

In addition, although a subject card was shown in the videotape, the subject, instead of being displayed in all caps, was displayed in red type in upper/lower case. This may have accounted for some confusion, since all of the school libraries used in this research used all caps to denote a subject heading. However, a clear description of the contents of the card and its cross reference information was not provided in the program. From discussions with librarians in both St. Louis and Bloomington, this is the

single most difficult item for elementary school children to understand. Unfortunately, there is reason to believe that the videotape served to cloud the issue even more.

Follow-up Questionnaire

Ninety-four students answered seven questions in follow-up to their viewing of the tape. Three of the questions could be considered comprehension questions: What was the program about? How did the librarian help the kids? Are Fruit Loops healthier than Buckwheats? Two were related to the program's production: Did you think of the answers to any of the questions asked in the program? This show was most like: television, films, slides, filmstrips, photographs [check one]. A third asked about its appeal: Did you like the way this show was put together? A final question was designed to assess the degree of public library use among these fifth and sixth grade students by asking how often they go to the library.

Three questions of primary importance questioned viewers on their understanding of the videotape. To the extent the program succeeded in meeting its purpose, the responses to this questionnaire would have indicated that students understood: a) the subject nutrition was merely the vehicle for reviewing library skills; b) the librarian is a resource to be called on in the library, but does not bear ultimate responsibility; and c) the nutritional value of any single food cannot be determined by reference to its Minimum Daily Requirements alone. By these criteria, optimal responses would have a) described library search techniques in response to the question "what was the program about?"; b) described the librarian helping, showing, or telling, but not getting, giving, or finding information in response to the question "What did the librarian do to help the

kids?"; and c) responded "don't know" or "no" to the question "are Fruit Loops healthier than Buckwheats?"

Unfortunately, respondents were somewhat more inclined to perceive the videotape as having a nutrition, health, or food bent (52%) rather than a library skills direction (44%). On the librarian's role, almost all (92%) responded satisfactorily; it should perhaps be restated that all students had had regular experience in their school libraries. And on the third point, the Fruit Loops vs. Buckwheats question elicited a "no" or "don't know" response from 93% of the respondents. Although either could be considered a correct response, this question was poorly conceived and may not measure any program effects at all.

Questions on the program itself and its appeal may provide producers with some insight into the future use of the question/pause/continue technique and the use of still photographs with voice-over on videotape. The first of the program-specific questions, "Did you think of any of the answers to questions asked in the program" provided a check space for a yes or no response. Eighty-nine percent of the respondents indicated that they had, in fact, thought of the answers when the voice-over asked a question. While this may be inflated due to the way this question was posed, observation of students viewing the program did show that some viewers were mouthing or calling out answers at the appropriate times.

As a technique, slides on videotape were perceived by students as most like slides (46%) or filmstrips (28%). It appears that the illusion of movement by panning or zoom, provided by the videocamera, did not mask the true medium. If the reader assumes that video or film is more appealing to children of this age group, a comparison of this technique with a super 8mm program would be useful. The meaning and significance of students'

responses to this production will, therefore, be dependent upon comparison with other, differently produced, programs. Asked if they liked the manner in which the program was put together, 80% of the students responding said they did. However, the distinction between liking the show itself and liking the technique with which it was produced may be a difficult one to make. We cannot be confident the responses do not relate to the appeal of the program itself.

Intuitively, the 20% who said they did not like the way the show was put together seems more significant than the percentage implies alone. In the classroom, "like" of a media presentation is usually compared with doing some other in-class activity. While a student may report that s/he "liked" the program, the response may be completed by "instead of..." (listening to the teacher, doing math, etc.). Therefore, the reader may interpret the number of reported dislikes to mean that 20% would have preferred classwork to the program, while 80% preferred the program to classwork, but not to a film (for instance). Again, future program testing may provide more insight.

The last item on this questionnaire dealt with prior public library use. This provided some insight on the students' familiarity and experience with the public library. A full 90% of all respondents said they go to the public library at least occasionally. In addition, all subjects, both viewers and nonviewers, had experience in their school libraries.

Discussion

In all the classrooms tested, a discussion was held following the program's being shown and written test administered (in experimental groups) or following the written test of library skills alone (in control groups).

Discussions covered students' experiences in the library, their problems, likes, and dislikes. In classes that had seen the program, students were asked if they would be likely to do anything similar to what the children in the program did.

In general, viewers felt that the program did not depict a "real" event. Many of the responses to this question showed that among the program's discrepancies with reality was the idea of going to the library in response to a discussion about cereal. That would be too much bother and "I would just ask my parents" seemed to represent the consensus of opinion. Furthermore, actually taking the cereal box to the library seemed silly.

Problems encountered in the library centered around the use of library facilities. Using the card catalog, particularly when title and author are unknown, was a repeated response. A second kind of problem mentioned was that of missing, checked-out, or misshelved books or cards. This second problem may be interpreted in two ways: either the respondents are correct and the books they look for are not on the shelves, or they have problems with the Dewey Decimal system. However, the findings of the performance test given to randomly selected students from each class (reported above) suggest that fifth and sixth grade students at all ability levels are able to locate books on library shelves once they have the call numbers.

The problems reported by students who had not seen the program were not a great deal different from those described by viewers. Use of the card catalog when title and author are unknown was again often mentioned. Other problems were administrative in nature. Checking out books, wanting a book on display, and a limit on the number of books that can be checked out at one time were cited. Still other problems concerned the use of reference books, as well as resentment at having a teacher or librarian choose books for students.

Likes and dislikes about the library seem to be highly correlated with the extent of "rules" associated with going to the respondent's particular library (as opposed to libraries in general). On the positive side, students reported the social aspects of going to the library (meeting friends, nice librarian, quiet, etc.), and the availability of nonprint media (film, slides, TV, etc.). Other reported factors about the library that were liked were that the library has a lot of books in one place, reference books provide information you can't get any other way, and there are people (i.e., librarians) to help answer all different kinds of questions.

Having to keep quiet was the most often mentioned dislike about going to the library. This was followed closely by the unavailability or unsuitability (too hard or too easy) of books, having to pay for late books, not having a library card, and disliking a librarian. Nonviewers said they disliked finding books misshelved, checking out books, having to keep quiet, and being given drills by the librarian.

Research Design

The methodology employed for this evaluation is more complex than is commonly seen. The unusual design therefore provided one more aspect of the endeavor that could be tested. The two principal questions to be answered were how easily the design could be implemented (since no more than any two of the eight classes were treated in exactly the same way) and how rich the data yield would be.

By preparing a detailed list of procedures for each classroom to be visited, the potential problems in implementing a design of this type were minimized. The procedures were written out on 4 X 6 cards that could be readily shuffled and referred to. We conclude that carrying out a design

of this type is more complicated but that careful and self-conscious preparation by the field testers can overcome its complexity.

There are two ways in which the data yield from this design proved very satisfactory. One, by applying a number of measurement tools to tap different aspects of the same body of phenomena the whole is indeed greater than the sum of its parts. Our picture of what students know about using the library, their experience, their impression of the videotape, and so on is both richer and sharper than could have been achieved with a single measure alone.

The second sense in which the design "worked" is in its allowing for the test of alternative explanations. For instance, had a pretest/posttest design been used exclusively, one could question what effect the pretest had on posttest scores. But with the design used in St. Louis, students' posttest scores, with and without a pretest, can be compared.

Still other benefits were derived. One is its economy: only four person-days were required in the field. Another is the qualitative information we gained through talking with students, teachers, and librarians, and observing school library users. And not the least valuable finding is that we may wish to design future evaluations in light of what was learned here. In particular, we may wish to eliminate the pretest/posttest groups from any future design. Administration of the tests was both more awkward and time-consuming in classes of this type, and the results do not appear to be significantly different than in control/experimental groups.

SUMMARY AND CONCLUSIONS

The Agency for Instructional Television produced a videotape of slides with voice-over, entitled "The Public Library," as an experiment in the development of the Essential Skills Project. The videotape was intended to review library skills for fifth and sixth graders, and to present the ideas for a program on the same material. At the same time, AIT designed a study in which a variety of data providing a number of different measures could be collected. Both the videotape program and the research design were taken to metropolitan St. Louis for field testing.

All the data gathered lead to a conclusion that the program was not effective in communicating its message. In both a written test of library skills and a library performance exercise, students showed no evidence of improved library skills from exposure to the videotape program. (Neither was there statistically significant evidence of a negative effect.)

Some possible explanations for this may be found in the questionnaire administered after viewing the videotape. Fifty-two percent of the respondents thought the program had been about nutrition or some other health-related topic. This was in spite of the fact that when AIT researchers introduced themselves, they told all classes that AIT was interested in library skills.

The videotape program also presented some concepts in an ambiguous manner. For example, although a subject card was shown on the screen, it was in red type rather than all caps, as appears to be more common and was the way the subject card appeared in all test school libraries. Similarly, the cross-reference information on cards in the catalog was used to some degree, but not described, in the program. Although one of the program's characters uses an index, the narrator did not describe this use as fully

as that of the table of contents. All these points may have impinged on the results of testing.

Before production, fifth and sixth graders were assumed to have been exposed to the library and to know how to use its resources. This seems to be justified; in most cases the students tested knew how to use the encyclopedia, call letters, and tables of contents. Students do seem to have a great deal of difficulty with the subject card (confusing the subject with the title of the book), the use of the cross reference information contained on the card (which is supported by discussion with school librarians), and the use of various book indices (including the encyclopedia index).

Producers might consider selecting a library topic that can demonstrate, but not overpower, those skills that are lacking, while reinforcing those that have already been mastered. With this in mind, library skills might be demonstrated through the use of a recreational topic (dog training, bicycles, magic, etc.) rather than through one perceived as a "school" subject.

Students who saw the program were most inclined to compare it to slides or filmstrips. The production technique ("the way the program was put together") was generally liked, although we have no referent for comparison. Twenty percent of the respondents specifically said they did not like the program. Alternative production techniques should be evaluated before any conclusions are drawn on this one.

Finally, this research has demonstrated the efficiency of the methodology. Careful design of testing conditions and a variety of tests provide a rich source of data at very little cost. The conscious use of multiple measures of a single attribute of interest, as well as collecting information on several attributes in a single evaluation effort are worthy of replication.

APPENDICES

I. Written test of library skills

II. Performance test of library skills

III. Questionnaire

Appendix I. Written test of library skills

AGE _____

GRADE _____

PLEASE ANSWER THE QUESTIONS THE BEST WAY YOU CAN. YOU WILL NOT BE GRADED; THIS IS NOT A TEST. PLEASE DON'T FEEL THAT YOU HAVE TO KNOW THE ANSWERS TO ALL THE QUESTIONS.

1. ALL OF THE FOLLOWING WORDS ARE SUBJECTS IN THE CARD CATALOG. WHICH ARE THE TWO BEST SUBJECTS FOR FINDING INFORMATION ON BLOODHOUNDS? (PUT A CHECK MARK NEXT TO THE TWO YOU PICK.)

   _____ ANIMALS

   _____ VERTEBRATES

   _____ DOGS

   _____ HUNTING ANIMALS

   _____ BLOOD BANKS

2. IF YOU WANTED TO FIND INFORMATION ON THE GREAT MAGICIAN HOUDINI, WHERE DO YOU THINK YOU WOULD GET THE INFORMATION?

   _____ "HOUDINI" IN THE ENCYCLOPEDIA

   _____ "MAGIC" IN THE CARD CATALOG

   _____ "HOUDINI" IN THE DICTIONARY

   _____ "MAGIC" IN THE INFORMATION PLEASE ALMANAC

3. YOU WANT TO DO A REPORT ON WORLD HUNGER. LIST SOME WORDS YOU THINK MIGHT BE LISTED IN THE ENCYCLOPEDIA OR CARD CATALOG THAT MIGHT LEAD YOU TO INFORMATION ABOUT WORLD HUNGER.

2

4. LOOK AT THE DRAWERS BELOW. PUT A 1 IN THE DRAWER YOU WOULD LOOK IN TO FIND INFORMATION ON "MAGIC".

PUT A 2 IN THE DRAWER YOU WOULD LOOK IN TO FIND A BOOK WRITTEN BY "NEUBERT".

PUT A 3 IN THE DRAWER YOU WOULD LOOK IN TO FIND THE BOOK TITLED "ZOOS OF AMERICA".

AB - BE	BF - CO	CP - DE	DF - E
F - FO	FP - G	H - J	K - LO
LP - ME	MF - NO	NP - PR	PS - TE
TF - U	V - WO	WP - X	Y - Z

3

5. YOU WANT TO LEARN TO MAKE COOKIES. THE FOLLOWING BOOKS ARE LISTED IN THE CARD CATALOG. WHICH ONE MIGHT HAVE A RECIPE FOR COOKIES IN IT? (CHECK YOUR ANSWER.)

☐

J
641
Li NUTRITION

Life (Periodical)
Food and nutrition, by William H. Sebrell Jr., James J. Haggarty and the editors of Life. Time, Inc., c1967.
200 p. illus maps (Life Science Library)
Also in reference collection

1. Food. 2. Nutrition. I. Series. II. Title

☐

Ej
642
Ne FOOD

Neigoff, Anne
Dinner's ready. Pictures by Charles Lynch. Whitman, c1971.
unpg. illus.

I. Food. I. Title.

☐

J
642
Cl FOOD

Clark, Carel
Let's start cooking. William R. Scott, c1973. 60 p. illus.

1. Cooking. 2. Food. I. Title.

4

6. LOOK AT THE CARD FROM A CARD CATALOG BELOW:

J 613.2 Be	NUTRITION Benziger, Barbara Controlling your weight. Illus. by Roland Rodegast. Watts, c1973. 64 p. illus. appendixes index I. Weight control. 2. Nutrition. I. Title.

A. WHAT IS THE AUTHOR'S NAME? _____

B. WHAT ARE THE CALL LETTERS OF THE BOOK? _____

C. WHAT IS THE TITLE OF THE BOOK? _____

D. WHAT DOES THE "Be" ON THE LAST LINE OF THE CALL LETTERS STAND FOR?

_____

E. WHAT IS THE SUBJECT HEADING? _____

5

7. LOOK AT THE FOLLOWING:

158

"The Truth Need Not Necessarily Be Simple," 55
thiamine, *see* vitamin B$_1$
tools, first designers of, 47; for measuring, 47
Treatise on Scurvy, A, 21
tryptophan, 98
Tsaiaoa, 30

ultraviolet light, 86-87, 119
"unknown factor A," 67
"unknown substances," 65
Utrecht, University of, 33, 55
Utrecht Commission, 34, 35

vicenzol, 87
vitamin A, as the "growth vitamin," 68; cost of, 120; cure for night blindness, 68; destroying, 35; discovery of, 67-68; effects on rats, 72; for children, 132; for rickets, 85; in margarine, 111; measuring minute quantities of, 69-70; power of curcdon, 69; purifying, 69; separating, 69
vitamin B, complex, 91-92; discovery of, 72, 73, 91, 94; elevin substances for, 91; family, 73, 91-92, 94, 98; in bread, 111; in foods, 92; overdosage of, 129; research today, 140, 141; separation of, 92-94
vitamin B$_1$, 59, 92, 94, 104, 109, 119
vitamin B$_2$, 92, 98, 104
vitamin B$_6$, 92, 98
vitamin B$_{12}$, 92, 103, 104, 134
vitamin C, animal manufacturing of, 73-74; discovery of, 73; enrichment, 111, 113-114; Eskimo intake of, 137-138; foods rich in, 77; for children, 132; in cow's milk, 73; industrial production of, 78; isolation of, 77; loss of, 77; manufacturing of, 73-74; overdosage of, 129; pure, 24, 73; scientific study of, 74; weekly production of, 73
vitamin chart, 115-116, 150-151
vitamin D, discovery of, 85; for children, 132; for rickets, 87; in milk, 111; manufacture of, 87; overdosage of, 129
vitamin deficiency disease, 83, 112, 126; definition of, 24
vitamin E, discovery of, 87; in common foods, 88, 111; for rats, 87; human need for, 88
"vitamins," 57, 67, 72
vitamin education, 116
vitamin F, 92
vitamin G, *see* vitamin B$_2$
vitamin K, discovery of, 88; foods found in, 88; for coagulation of blood, 90; injection of, 88; naming of, 90
vitamin plant, 70
vitamin-rich feeds, 140
vitamins, adding to bread, 110; common factors in, 70; content of, 140; definition of, 24; disappearance of, 92; early production of, 119; enrichment, 110-113; first discovery of, 24, 57; in combating disease, 78; in foods, 73, 122, 126; intake, 142; isolating pure samples of, 69, 72, 73, 77; laboratory experiment in, 63; mass production of, 104, 116-117; naming of, 92; needs, 110; origin of name, 57; pre-mix, 115; research today, 135, 137, 140-141, 142-143; synthesizing, 78; therapeutic use of, 134; tools, 47, 142; "unknown substances," 56
Voit, Carl, 52

wafers, 117
War Food Administration, 111, 112
water, 52, 53
"whizzers," 117
whole-wheat bread, 109
whole-wheat flour, 109
William, Dr. Robert, 109
Wisconsin, University of, 63, 97
Woehler, Friedrich, 50-51

Yale University, 63, 73

Zurich, University of, 69

A. IS THIS: _____A TABLE OF CONTENTS

_____A PAGE IN THE DICTIONARY

_____AN INDEX

_____A PAGE IN THE ENCYCLOPEDIA INDEX

B. WHAT PAGE WOULD YOU TURN TO TO FIND INFORMATION ABOUT WHEN VITAMIN C WAS DISCOVERED?

PAGE _____

6

8. PUT A CHECK MARK NEXT TO THE CHAPTERS IN ANY OF THE THREE BOOKS THAT YOU THINK WILL HAVE INFORMATION ABOUT WHAT PEOPLE WILL BE EATING 100 YEARS FROM NOW.

CONTENTS 1

INTRODUCTION 7

1 FROM SOUP TO NUTS 8

2 FILLING THE LARDER 32

3 FIRE, SPICE AND ICE—THE PRESERVERS 58

4 MIRACLE OF DIGESTION 80

5 THE GREAT VITAMIN MYSTERY 102

6 DISEASES OF FEAST 129

7 FOOD FADS AND FRAUDS 148

8 FEEDING THE FAMILY OF MAN 165

[illegible] 183
[illegible] 194
[illegible] 199
[illegible] 207

2

Contents

1. The Chemicals We Eat 9
2. The Foods We Eat 18
3. The Natural Poisons 24
4. Food Additives 32
5. Our Daily Drugs 58
6. Chemicals Through Animals to Man 68
7. More Poisons in Our Foods 80
8. Foods for the Future 98
9. What Should We Do? 102

3

CONTENTS

Part I:	The Long Search for Clues	11
	1. "Limeys"	13
	2. Rice	27
	3. New Tools and a New World	45
Part II:	Solving the Mystery	61
	1. A, B and C	63
	2. D, E and K	79
	3. More About B	91
Part III:	Today and Tomorrow	105
	1. The Bread Revolution	107
	2. Fads and Frauds	121
	3. Where Do We Stand Now?	131
Bibliography		146
Agencies Offering Nutrition Information		147
Vitamin Charts		150
Index		155

Appendix II. Performance test of library skills

PERFORMANCE TEST

1. FIND THE OLD NAME FOR THE COUNTRY THAT IS NOW THE MALAGASY REPUBLIC.

_____

NOTE: IF STUDENTS ASK, TELL THEM TO USE THE ENCYCLOPEDIA; BE SURE TO NOTE THOSE THAT ASK.

2. USING THE BOOK ON THE TABLE, TURN TO THE PAGE THAT HAS INFORMATION ABOUT WHEN VITAMIN C WAS DISCOVERED.

PAGE #_____

NOTE: MAKE NOTE OF WHETHER THE TABLE OF CONTENTS OR INDEX IS USED; IF STUDENTS ASK, TELL THEM TO USE THE INDEX, MAKING SPECIAL NOTE OF THOSE WHO ASK.

3. USING THE CARD CATALOG, FIND TWO (2) BOOKS ON ASTRONOMY.

CALL SLIP #1	CALL SLIP #2
CALL NUMBER _____	CALL NUMBER _____
_____	_____
AUTHOR _____	AUTHOR _____
TITLE _____	TITLE _____

4. YOU WANT TO FIND OUT MORE ABOUT MAGIC. SHOW ME WHICH DRAWER IN THE CARD CATALOG YOU WILL LOOK IN AND TELL WHY.

5. HERE IS THE NAME OF A BOOK: _____.
   (A) LOOK IT UP IN THE CARD CATALOG.
   INTERVIEWER ASK: IS THERE ANY OTHER WAY TO FIND IT?

   (B) HOW MANY OTHER BOOKS ARE THERE BY THE SAME AUTHOR? _____
   HOW MANY OTHER BOOKS ARE THERE UNDER THE SAME SUBJECT? _____
   (C) WHAT ARE THE CALL LETTERS OF THE BOOK? _____
   (D) PLEASE BRING THE BOOK TO ME.

APPENDIX III. Questionnaire

AGE_____
GRADE_____

MASTER APPEAL N = 94

WHAT WAS THE PROGRAM ABOUT?

	Any response describing library	39 = 44%
	Any response describing health, nutrition, cereal	46 = 52%
N = 88	Any other response	3 = 3%

DID YOU THINK OF THE ANSWERS TO ANY OF THE QUESTIONS ASKED IN THE PROGRAM?

N = 94

___YES	___NO
84 = 89%	10 = 11%

HOW DID THE LIBRARIAN HELP THE KIDS? (BE SPECIFIC)

N = 86

By helping them use the c/c, encyclopedia, reference books, etc. 14 = 13%
By helping them look/find 28 = 33%
By show/telling them where to look/find then s/t where to go 36 = 44%
Helping them find the meaning of words 2 = 1%, yes 5 = 6%, gave them a subject 1%

ARE FRUIT LOOPS HEALTHIER THAN BUCKWHEATS?

N = 94

___YES	___NO	___I DON'T KNOW
7 = 7%	43 = 46%	44 = 47%

HOW OFTEN DO YOU GO TO THE PUBLIC LIBRARY?

N = 93

1 = 1% EVERYDAY
21 = 23% ONCE A WEEK
13 = 14% MORE THAN ONCE A MONTH
7 = 8% ONCE A MONTH
42 = 45% OCCASIONALLY
9 = 10% NEVER

CHECK THE CLOSEST ANSWER.

THIS SHOW WAS MOST LIKE:

N = 94

5 = 5% ___TELEVISION
14 = 15% ___FILMS
43 = 46% ___SLIDES
26 = 28% ___FILMSTRIPS
6 = 6% ___PHOTOGRAPHS

DID YOU LIKE THE WAY THIS SHOW WAS PUT TOGETHER?

N = 92

___YES	___NO
73 = 78%	19 = 20%